



# **PUBLIC DISCLOSURE STATEMENT**


**AUSTRAL BRICKS (TAS) PTY LTD**

**PRODUCT CERTIFICATION**

**FY2021–22**

Australian Government  
**Climate Active**  
**Public Disclosure Statement**



NAME OF CERTIFIED ENTITY	Austral Bricks (TAS) Pty Ltd
REPORTING PERIOD	1 July 2021 – 30 June 2022 Arrears report
DECLARATION	<p><i>To the best of my knowledge, the information provided in this public disclosure statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.</i></p> <p><i>Signature here</i> </p> <hr/> <p>Matthew Gordon Business Unit Manager Tasmania 12 January 2023</p>



**Australian Government**  
**Department of Climate Change, Energy,  
the Environment and Water**

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Version March 2022. To be used for FY20/21/CY2021 reporting onwards.



# 1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	5467 tCO <sub>2</sub> -e
THE OFFSETS BOUGHT	30% ACCUs, 70% VCU's
RENEWABLE ELECTRICITY	N/A
TECHNICAL ASSESSMENT	Period: 1 July 2019 to 30 June 2020 Terence Jeyaretnam Ernst & Young Next technical assessment due: 30 October 2023

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## 2. CARBON NEUTRAL INFORMATION

### Description of certification

This Climate Active certification concerns bricks and pavers manufactured at Austral Bricks (Tas) Pty Ltd's Longford site (Figure 1). At this site Austral Bricks produces a range of bricks and pavers for the Tasmanian, other Australian markets and overseas markets. The functional unit for this certification is 1,000 Standard Brick Equivalents (SBEs) of bricks or pavers.

This PDS has been prepared and verified based on the Climate Active, the ISO14040:2006 and ISO14044:2006 standard and emissions are offset in accordance with Climate Active Technical Guidance.

*“Climate Active certified products are an important step in Brickworks journey towards becoming Australia’s most sustainable building materials company.”*



## Product description

**The functional unit for this certification** is t CO<sub>2</sub>-e/ 1,000 Standard Brick Equivalents (SBEs) of bricks or pavers manufactured in Longford and used in various applications throughout Tasmania, interstate and overseas.

The certification is cradle-to-grave and full coverage.

# 3. EMISSIONS BOUNDARY

## Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

**Quantified** emissions have been assessed as 'attributable processes' that become the product, make the product and carry the product through its life cycle. These have been quantified in the carbon inventory.

**Non-quantified** emissions have been assessed as attributable and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

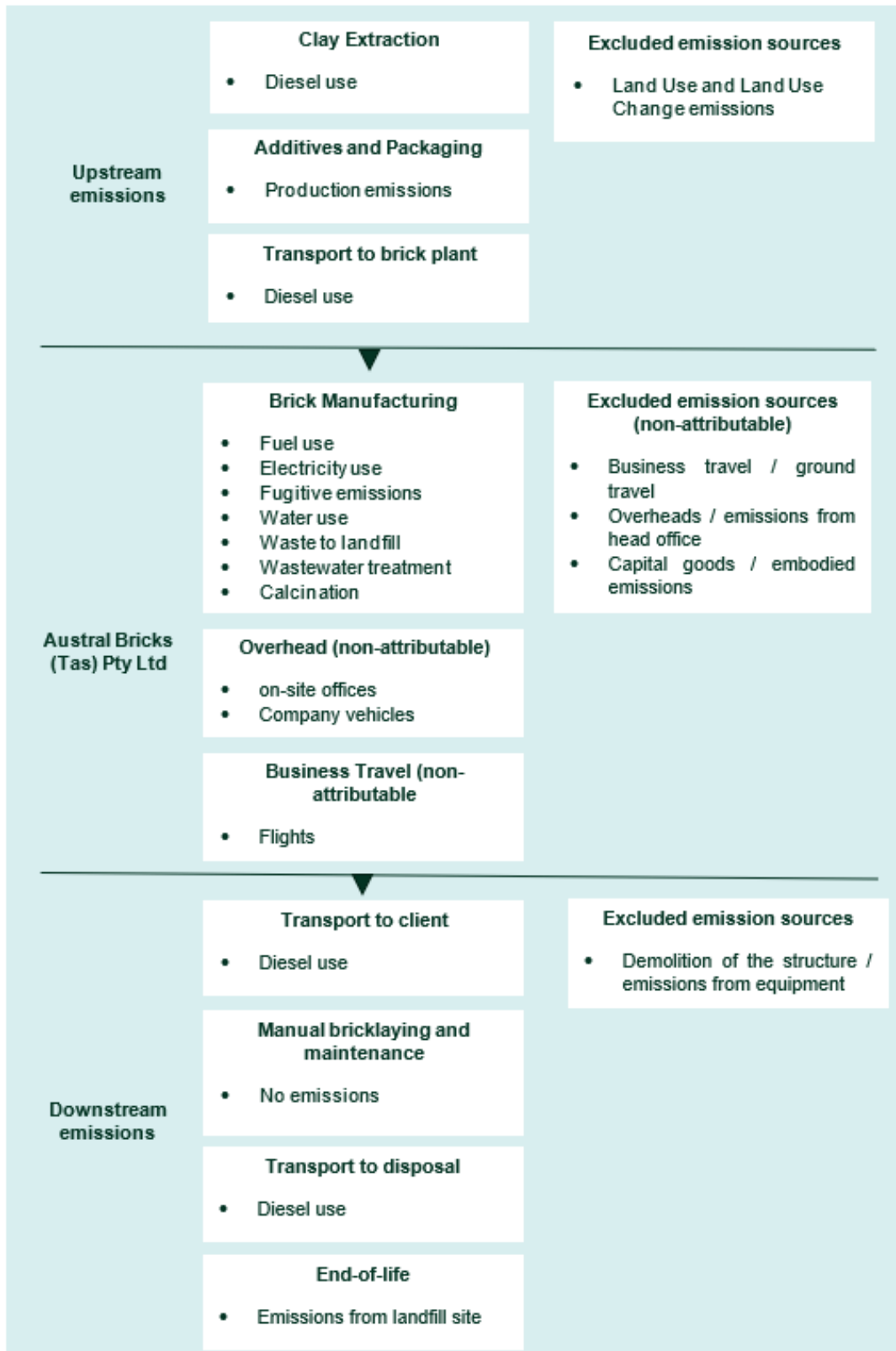
## Outside the emissions boundary

**Non-attributable** emissions have been assessed as not attributable to a product or service. They can be **optionally included** in the emissions boundary and therefore have been offset, or they can be listed as outside of the emissions boundary (and are therefore not part of the carbon neutral claim). Further detail is available at Appendix D.

Inside emissions boundary		Outside emission boundary
<b><u>Quantified</u></b>	<b><u>Non-quantified</u></b>	<b><u>Non-attributable</u></b>
Fuels for clay extraction	Additives not reported under NGER	Business travel (flights)
Clay transport to plant	Packaging	Head office business travel
Electricity	Waste	Head office energy use
Fuels	Water use and wastewater treatment	Capital goods
Lubricants and greases		
Additives reported under NGER		
Fugitive emissions	<b><u>Optionally included</u></b>	
Transport to clients	Building demolition	
End of life emissions		

## Product process diagram

Cradle to grave.



## Data management plan for non-quantified sources

The data management plan below outlines how more rigorous quantification can be achieved for material (greater than 1%) non-quantified emission sources.

The following items meet the condition of 'attributable' but are below the cut-off and are considered non-quantified. We have applied uplift factors based on the previous LCA for bricks manufactured in Longford.

- Additives not reported under National Greenhouse and Energy Reporting (NGER) Act 2007: We use a large range of additives to give each brick its unique properties (colour, glaze, etc.). Additives that are energy carriers (e.g. char, sawdust, vegetable oils, starch-based additives) are reported under our NGER obligations and have been included based on actual use and emission factors. The remaining additives are mainly minerals (e.g. iron oxide, manganese oxide) or frits (glass containing colorant). Using conservative literature data applicable to additives used at Longford (Tas), based on Brickworks' LCA FY19, the weighted average emission factor was established as 214 kg CO<sub>2</sub>e/t of additives not already reported under NGER. This equates to 1.4 kg CO<sub>2</sub>e per tonne of bricks. This factor has been applied as the uplift factor across all products.
- Packaging, waste to landfill, water use and wastewater treatment: Based on Brickworks' LCA FY19, the total of greenhouse gas emissions associated with these sources added up to 2.2 kg CO<sub>2</sub>e per tonne of bricks. This factor has been applied as the uplift factor across all products.

Cumulatively, the uplift factors account for 2% of the Longford products' life cycle emissions.



## 4. EMISSIONS REDUCTIONS

### Emissions reduction strategy

Austral Bricks Tasmania understands and accepts responsibility for environmental protection which is integral to the conduct of its commercial operations. Austral Bricks Tasmania's objective is to comply with all applicable environmental laws, regulations and community standards in a commercially effective way. Austral Bricks is committed to encouraging concern and respect for the environment and emphasising every employee's responsibility for environmental performance.

Reducing energy consumption, emissions and associated costs are key issues organisations are facing in a carbon constrained world with increasing energy prices. Austral Bricks Tasmania actively participates in greenhouse gas reporting scheme such as the National Greenhouse and Energy Reporting (NGER) Act 2007. This program requires organisations to measure and report their energy consumption, production and greenhouse gas emissions under strict protocols. The data is subsequently collated and reported to Senior Management and the Board.

Energy efficiency is a key priority for Brickworks with periodic audits undertaken of all kilns. In 2018, gas efficiency plans were developed for all Australian brick kilns including Austral Bricks Longford. Those plans are continuing to be implemented. In 2020 Brickworks released its sustainability strategy which includes a stretch target to improve our gas efficiency by 10% at our Austral Bricks plants by 2030 compared to a baseline of FY18 and investment in the transition to alternative fuels.

Austral Bricks Tasmania produces low embodied carbon bricks fired in traditional kilns fueled by saw dust at over 1000°C. The management team has implemented numerous initiatives to reduce energy consumption and greenhouse gas emissions, as set out below. These initiatives will drive down energy consumption per unit of production.

Brickworks' sustainability strategy, 'Build for Living: Towards 2025', recognises the substantial environmental and social impacts of the built environment. The strategy focuses on the opportunity to make buildings and cities safe, resilient and sustainable through reducing carbon emissions. The strategies are available on Brickworks' website: <https://www.brickworks.com.au/sustainability/> and <https://www.brickworks.com.au/climate-related-impacts-and-responses/>.

Brickworks is currently in the process of finalising updates to our policies on climate related impacts which will be included in our FY2023 PDS.

### Emissions reduction actions

Increasing voids reduces raw material requirements and supports energy efficiency. During FY22 focus has continued on increased voids across a range of bricks and factories, resulting implementation at four of our brick factories with maintained or improved product quality. Austral Bricks Tasmania is currently investigating increasing voids in some of their products.

## 5. EMISSIONS SUMMARY

### Emissions over time

Brickworks has completed a comprehensive life cycle assessment for our Longford Plant. This assessment covers all brick and pavers made at the Longford plant and covers the emissions boundary as previously described.

Emissions since base year		Total tCO <sub>2</sub> -e	Emissions intensity of the functional unit
Base year:	2012-13	3402	
Year 1:	2013-14	3668	
Year 2:	2014-15	3381	
Year 3:	2015-16	4832	
Year 4:	2016-17	5088	
Year 5:	2017-18	5932	
Year 6:	2018-19	5054	
Year 7:	2019-20	6656	
Year 8:	2020-21	6188	0.481
Current year:	2021-22	5467	0.417

### Significant changes in emissions

Total emissions for Austral Bricks (TAS) Pty Ltd decreased in the reporting year due to a reduction in electricity supply emissions and reduction in product transfers interstate. Emission factors for electricity decreased for Tasmania over the financial year leading to a reduction in associated emissions. A reduction in sales and transfers interstate leading to a reduction in emissions from transport to the customer. Emissions in previous years have been overstated due to a double accounting of our internal fleet delivery emissions which has been resolved for the current reporting period.

Emission source name	Current year (tCO <sub>2</sub> -e)	Previous year (tCO <sub>2</sub> -e)	Detailed reason for change
Transport to customer	1915.98	2519.21	Reduction due to decreased sales and transfers interstate. Removal of double accounting of internal fleet deliveries.
Electricity	496.5	531.12	Reduction due to reduction in emission factors in the National Greenhouse Gas Accounts.

### Use of Climate Active carbon neutral products and services

N/A.

## Product emissions summary

Brickworks has undertaken an LCA for our total brick and paver production in Longford. The table below shows the life cycle emissions per 1000 standard bricks equivalents. These emissions include emissions from transport of bricks to clients by a delivery truck over 50 km. When determining the emissions associated with bricks supplied to a client or project, we use the actual mass of the bricks supplied and actual transport distance from plant to client to get an accurate carbon footprint for the consignment.

Note: in line with our NGER reporting, we have applied a location-based approach for electricity.

Stage	tCO <sub>2</sub> -e
Extraction of clay (diesel use)	24.52
Transport of clay to Longford (diesel use)	102.68
On-site energy: Longford plant electricity use	496.54
Truck vehicle fleet (diesel); on-site vehicles	174.8
On-site energy: Kiln fuel (bituminous coal) use	0.00
On-site energy: Kiln fuel (natural gas) use	1837.20
On-site energy: Kiln fuel (saw dust) use	168.75
Calcination of clay	151.42
Body additive (char) use	25.19
Transport of products to customer	1915.98
Manual application and manual maintenance/cleaning	0.00
Transport of bricks to end-of-life landfill	427.04
Bricks in landfill	0.00
Uplift for packaging, business travel and other overhead	86.21
Uplift for additives not reported under NGER	56.64
<b>Total t CO<sub>2</sub>-e</b>	<b>5466.97</b>

Emissions intensity per functional unit (tonne per '000SBE)	0.417
Number of functional units to be offset ('000 SBEs )	13,109
<b>Total emissions to be offset</b>	<b>5,466.97</b>

## 6. CARBON OFFSETS

### Offsets retirement approach

In arrears	
1. Total offsets previously forward purchased and banked for this report	8192
2. Total emissions liability to offset for this report	5467
3. Net offset balance for this reporting period	2725
4. Total offsets to be forward purchased to offset the next reporting period	5494
5. Total offsets required for this report	5506

### Co-benefits

#### Tasmanian Native Forest Protection REDD Forests:

The REDD Forests project equates to 30% of Austral Bricks (Tas) offsets for financial year 2022.

Tasmania is internationally recognised for its native forest, endemic species and significant biological diversity. However, significant tracts of native forest are still being logged or are scheduled for logging to make way for pasture or other agricultural use.

These pioneering projects minimise greenhouse gas emissions by preventing the release of carbon stored in the trees, which would otherwise occur through the logging, processing and use of the timber. The carbon credits provide a means for landholders to pursue a new business model, generating revenue from protecting trees rather than clearing them.

In addition, the projects help to protect and restore Tasmania's valuable native forests, which provide a habitat for a number of endangered species including the wedge-tailed eagle, spotted quoll and the iconic Tasmanian devil.

#### International Units: Indian Wind and Solar:

Indian wind and solar VCUs comprise the remaining 70% of carbon offsets. Solar and wind projects provide emission free, affordable energy to the Indian electricity grid. Our procurement of Indian VCUs supports the transition away from India's fossil fueled dominated energy mix, and provides co-benefits including cleaner air, good work opportunities and improved energy equity.

### **International Units: Siam Cement Biomass Project**

The Siam Cement Biomass Project VCUs have been banked for future reports.

Thailand heavily relies on the burning of fossil fuels for its cement industries, even though cement production is an emission-intensive activity – making up an estimated 5% of all global man-made CO<sub>2</sub> emissions.

New infrastructure now enables the five cement manufacturing plants involved in this project to use alternative fuels and biomass residue, including rice husks, wood processing residues and other agricultural waste. As a result, they have been able to reduce their dependence on fossil fuels such as the coal and lignite fuel mixes they previously used in their kilns.

This project funds a range of social and environmental programs including health clinics to service the neighboring communities, over 65,000 check dams for upstream forest conservation, school scholarships, mobile health clinics and the development of small-scale local industries. Farmers also now profit from a supplementary income and additional jobs have been created thanks to the project's efficient supply chains and manufacturing processes for biomass fuels.

## Eligible offsets retirement summary

Offsets cancelled for Climate Active Carbon Neutral Certification												
Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity (tCO <sub>2</sub> -e)	Eligible quantity used for previous reporting periods	Eligible quantity banked for future reporting periods	Eligible quantity used for this reporting period	Percentage of total (%)	
<b>Forests Alive: Protection of Tasmanian Native Forest</b>	ACCU	ANREU	26/07/2021	3,801,767,395 - 3,801,769,296	2020-21		1902	250	12	1640	30%	
<b>Forests Alive: Protection of Tasmanian Native Forest</b>	ACCU	ANREU	28/06/2022	8,330,227,186 - 8,330,229,285	2021-22		2100	0	2100	0	0%	
<b>Mahindra Solar Power, India</b>	VCU	VERRA	26/07/2021	9040-63312258-63317257-VCS-VCU-997-VER-IN-1-1767-01012019-23122019-0	2019		5000	0	2713	2287	42%	
<b>India Wind Power, Mahindra, India</b>	VCU	VERRA	22/12/2020	9040-63073262-63078261-VCS-VCU-997-VER-IN-1-1767-01012019-23122019-1	2019		5000	3460	0	1540	28%	
<b>Siam Cement Biomass Project</b>	VCU	VERRA	29/06/2022	12639-422345561-422346241-VCS-VCU-842-VER-TH-4-403-01012017-30062017-0	2017		681	0	681	0	0%	
<b>Total offsets retired this report and used in this report</b>										5467		
<b>Total offsets retired this report and banked for future reports</b>									5506			

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Australian Carbon Credit Units (ACCU)	1640	30%
Verified Carbon Units (VCU)	3827	70%

## 7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

### Renewable Energy Certificate (REC) Summary

N/A



# APPENDIX A: ADDITIONAL INFORMATION

Offset details



This certificate verifies that


## Austral Bricks Pty Ltd

For the period 01.07.2020 to 30.06.2022 the direct and indirect emissions have been measured and offset. The emissions amounted to

**6902 tonnes of greenhouse gas emissions**

by investing in South Pole's climate protection projects:  
Mahindra Solar Power, India  
Protection of Tasmanian Native Forest, Australia

**Renat Heuberger**  
CEO, South Pole

 Thank you for committing to bold climate action. Your contribution is not only a meaningful step towards mitigating climate change globally, but also changes lives for the better by contributing to the Sustainable Development Goals set out by the UN.

Retirement ID 9040-63312258-63317257-VCS-VCU-987-VER-IN-1-1787-01012019-23122019-0  
Retirement ID 3,801,787,395 - 3,801,789,296  
Certificate number C2079EN, 07.2021  
Date 26/07/2021

This certificate is issued by South Pole. For more information about our services and more than 700 climate protection projects, please visit: [southpole.com/projects](https://southpole.com/projects).  
The CO<sub>2</sub> emissions indicated on the certificate are compensated through investments in the above mentioned carbon offset projects based on international standards.





This certificate verifies that

## **Austral Bricks Tasmania**

has compensated

**5,000 tonnes of greenhouse gas emissions**

by investing in South Pole's climate protection project:  
Indian Wind Power, India



**Renat Heuberger**  
CEO, South Pole



Thank you for committing to bold climate action. Your contribution is not only a meaningful step towards mitigating climate change globally, but also changes lives for the better by contributing to the Sustainable Development Goals set out by the UN.

Retirement ID 9040-63073262-63078261-VCS-VCU-997-VER-IN-1-1767-01012019-23122019-0  
Certificate number C1838EN, 12.2020  
Date 22/12/2020



This certificate is issued by South Pole. For more information about our services and more than 700 climate protection projects, please visit: [southpole.com/projects](https://southpole.com/projects).  
The CO<sub>2</sub> emissions indicated on the certificate are compensated through investments in the above mentioned carbon offset projects based on International standards.

Logged in as: Saehaneul Moon / Industry User

## Transaction Details

Transaction details appear below.

### Transaction Approval

The transaction has been submitted for approval. An email has been sent to approvers. To approve this transaction, an authorised approver must log in to the ANREU.

**Transaction Initiator** Moon, Saehaneul

✖ Cancel - Not Approved

**Transaction ID** AU22833  
**Current Status** Awaiting Account Holder Approval (95)  
**Status Date** 28/06/2022 16:18:18 (AEST)  
 28/06/2022 06:18:18 (GMT)  
**Transaction Type** Cancellation (4)  
**Transaction Initiator** Moon, Saehaneul  
**Comment** Carbon credits retired on behalf of Austral Bricks Brickworks for the purposes of Climate Active Certification

### Transferring Account

**Account Number** AU-2977  
**Account Name** South Pole Australia Financial Services Pty Ltd  
**Account Holder** South Pole Australia Financial Services Pty Ltd

### Acquiring Account

**Account Number** AU-1068  
**Account Name** Australia Voluntary Cancellation Account  
**Account Holder** Commonwealth of Australia

### Transaction Blocks

Party	Type	Transaction Type	Original CP	Current CP	ERF Project ID	NGER Facility ID	NGER Facility Name	Safeguard	Kyoto Project #	Vintage	Expiry Date	Serial Range	Quantity
AU	KACCU	Voluntary ACCU Cancellation			<a href="#">EOP101157</a>					2021-22		8,330,227,186 - 8,330,229,285	2,100

### Transaction Status History

Status Date	Status Code
28/06/2022 16:18:18 (AEST) 28/06/2022 06:18:18 (GMT)	Awaiting Account Holder Approval (95)

[Privacy](#)



## Certificate of Verified Carbon Unit (VCU) Retirement

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 29 Jun 2022, 681 Verified Carbon Units (VCUs) were retired on behalf of:

Austral Bricks (Brickworks)

**Project Name**

Siam Cement Biomass Project

**VCU Serial Number**

12639-422345561-422346241-VCS-VCU-842-VER-TH-4-403-01012017-30062017-0

**Additional Certifications**

Powered by  APX

## APPENDIX B: ELECTRICITY SUMMARY

N/A

# APPENDIX C: INSIDE EMISSIONS BOUNDARY

## Non-quantified emission sources

The following sources emissions have been assessed as attributable, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions are accounted for through an uplift factor. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Relevant-non-quantified emission sources	(1) Immaterial	(2) Cost effective (but uplift applied)	(3) Data unavailable (but uplift applied & data plan in place)	(4) Maintenance
Additives not reported under NGER	No	No	Yes	No
Packaging	No	No	Yes	No
Waste	Yes	No	No	No
Water use and wastewater treatment	Yes	No	No	No

## Excluded emission sources

Attributable emissions sources can be excluded from the carbon inventory, but still considered as part of the emissions boundary if they meet **all three of the below criteria**. An uplift factor may not necessarily be applied.

1. A data gap exists because primary or secondary data cannot be collected (**no actual data**).
2. Extrapolated and proxy data cannot be determined to fill the data gap (**no projected data**).
3. An estimation determines the emissions from the process to be **immaterial**).

	No actual data	No projected data	Immaterial
Land use and land use change emission	Yes	Yes	Yes
Demolition of the structure / emissions from equipment	Yes	Yes	Yes

## APPENDIX D: OUTSIDE EMISSION BOUNDARY

Non-attributable emissions have been assessed as not attributable to a product or service (do not carry, make or become the product/service) and are therefore not part of the carbon neutral claim. To be deemed attributable, an emission must meet two of the five relevance criteria. Emissions which only meet one condition of the relevance test can be assessed as non-attributable and therefore are outside the carbon neutral claim. Non-attributable emissions are detailed below.

1. **Size** The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions
2. **Influence** The responsible entity has the potential to influence the reduction of emissions from a particular source.
3. **Risk** The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.
4. **Stakeholders** Key stakeholders deem the emissions from a particular source are relevant.
5. **Outsourcing** The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.

Emission sources tested for relevance	(1) Size	(2) Influence	(3) Risk	(4) Stakeholders	(5) Outsourcing
Head Office business travel	No	Yes	No	No	No
Head Office energy use	No	Yes	No	No	No
Capital goods	No	Yes	No	No	No

The following items meet the condition of 'non-attributable' and are therefore left outside the system boundaries:

- Corporate business travel and head office energy use (at 738-780 Wallgrove Rd, Horsley Park NSW) have been excluded from the boundary, as these emission sources are not attributable to the products.
- The embodied emissions of capital goods (plant equipment, buildings, infrastructure) are considered non-attributable to the product. This is consistent with industry standard LCAs for construction products, as outlined in the Product Category Rules (PCR) of the International EPD System and has been verified by the Registered Consultant that has compiled our inventory (Rob Rouwette; Energetics).

# APPENDIX E: LCA INFORMATION

## Product Description

Brickworks Limited (Brickworks) is one of the world's leading providers of building products, employing 1187 full time equivalent employees across its Australian operations and 932 employees in North America. Austral Bricks, a subsidiary of Brickworks has been transformed from originally a New South Wales state based operation to a national organisation with manufacturing operations in NSW, Victoria, Tasmania, South Australia, Western Australia and Queensland. Austral Bricks manufactures and markets clay products such as bricks and pavers. The manufacturing process involves mining clay and shale and mechanically processing it prior to shaping and firing the bricks in kilns fuelled predominately by natural gas.

Austral Bricks Longford, Tasmania operates a low carbon operation whereby the kiln is predominately fired by sawdust. It has manufactured carbon neutral bricks since 2013/14 under the Climate Active Standards . This public disclosure statement concerns all bricks manufactured at Austral Bricks Longford which are certified carbon neutral.

Austral Bricks Tasmania certifies all the clay products manufactured at the Longford plant as carbon neutral under the Climate Active program. The products made at Austral Bricks Longford include bricks and pavers:

1. **Bricks.** Clay bricks are a common building material used predominantly for wall systems in residential buildings.
2. **Pavers.** Clay pavers are used for paving and landscaping in residential, commercial and industrial applications.

Bricks are used for a number of reasons:

- load-bearing capacity – this makes bricks suitable for load-bearing walls;
- aesthetics – bricks are available in a large range of colours, tones and textures;
- durability – bricks perform their function for the duration of the service life of the building; and
- bricks require relative little maintenance and cleaning.

Pavers are similar in appearance and characteristics to bricks, although they are used for paving rather than wall applications.

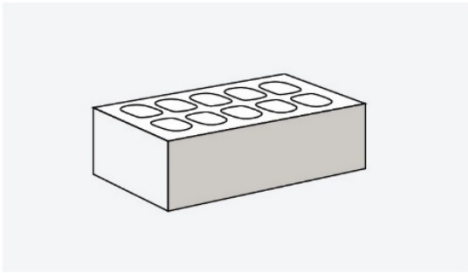
Table 1 and Table 2 present examples of the products included in this certification.



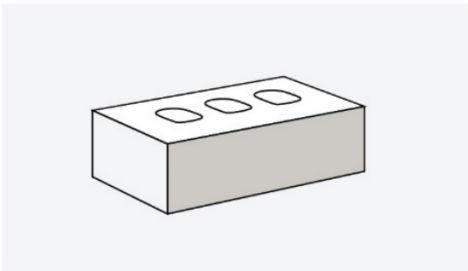
**Table 1: Typical brick product configurations (Source: Austral Bricks)**

Brick shape and core hole configuration

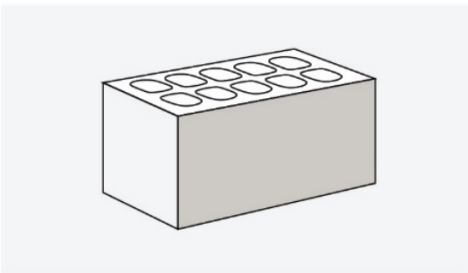
Examples - bricks in wall application



Standard brick with 10 core holes



Standard brick with 3 core holes



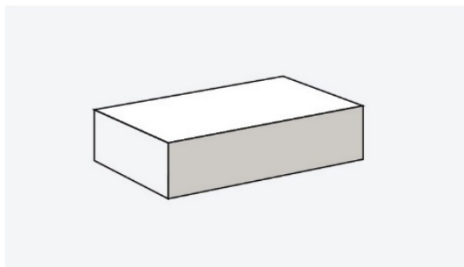
Twin brick



**Table 1: Typical paver product configuration (Source: Austral Bricks)**

Paver shape

Example - pavers in paving application



Classic paver (no core holes)



**The functional unit for this certification** is *t CO<sub>2</sub>-e/ 1,000 Standard Brick Equivalents (SBEs) of bricks or pavers*

Standard Brick Equivalent is a common unit of measurement across the clay brick industry for a brick. An SBE refers to the fired product and has the dimensions of 230x110x76mm. The products covered in this PDS come in a range of different sizes, which have been converted to SBEs.

The functional unit of SBE's has been built into the sites carbon calculator, to understand the amount of carbon associated with the lifecycle of each brick. The functional unit is not applicable to the carbon inventory as all products produced at Longford are offset.

### **Emissions Boundary**

For each life cycle stage, attempts have been made to identify and quantify material flows, energy flows and emission sources. The inputs include materials, fuels and energy while the outputs include products, emissions and waste.

For the purposes of this certification, the embodied energy incorporated in the infrastructure (buildings, plant, equipment, roads, vehicles, etc.) associated with manufacturing bricks and pavers is excluded from the product system. Other capital goods (e.g. power lines) are excluded as well. This is due to the long lifetime of capital goods in the brick lifecycle and the expected impact of this exclusion on the footprint is small.

Austral Bricks has applied a cut-off limit for flows smaller than 1% of expected greenhouse gas emissions. This means we have estimated emissions based on past data, instead of collecting detailed information for these smaller emission sources for the current period. These are listed as non-quantified sources in the diagram hereafter.

Note: Mortar and/or other materials used to bond bricks in their application are excluded from the carbon footprint assessment. The reasons for this exclusion are:

- Brickworks does not supply the mortar to clients, and therefore has no control over the composition and quantity of mortar used.
- Furthermore, the bricks and pavers are used in a range of applications that have varying requirements regarding ancillary materials. Any attempt to capture these requirements within the scope of this certification would introduce additional uncertainty.

### **Offsets retirement approach**

Upon determination of final tonnes of carbon emissions required to be offset, Brickworks engages accredited providers (such as Carbon Neutral, South Pole Group and CBL Markets) of carbon offsets (such as VCU's) to purchase and surrender the offsets as required under Climate Active at the end of the reporting period. The carbon emissions to be offset are determined based on the production volume of the bricks and pavers during the reporting period (FY22).

The purchase and surrender of the offsets will occur within 4 months of the reporting period. It is Brickworks intention to purchase eligible offsets generated from Australian and overseas projects.

Brickworks endeavors to procure approximately 30% portion of its carbon units from local Tasmanian forestry projects.

To ensure that the Carbon Neutral Brick remains competitively priced, international credits up to 70% are an important aspect to the purchasing strategy due to their lower cost. Brickworks engages a broker to find clean energy projects such as wind power in Asia.



An Australian Government Initiative

